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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,368	12/19/2001	Douglas Alan Gourlay	CISCP199/3486	8709

22434 7590 02/03/2006	EXAMINER
BEYER WEAVER & THOMAS LLP P.O. BOX 70250 OAKLAND, CA 94612-0250	JOO, JOSHUA

	ART UNIT	PAPER NUMBER
	2154	

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/23/2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-9,11-27 and 29-42* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-9,11-27 and 29-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Response to Amendment filed 11/23/2005

1.   Claims 1-2, 4-9, 11-27, 29-42 are presented for examination.

Claims 3, 10, and 28 have been previously canceled.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-2, 4-9, 11-27, 29-42 are rejected under 35 U.S.C. 102(e) as being anticipated

by Aviani et al, US Patent #6,798,125 (Aviani hereinafter).

4.   Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a

showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was

derived from the inventor of this application and is thus not the invention "by another," or by an

appropriate showing under 37 CFR 1.131.

5.   As per claims 1, 6, 7, and 8, Aviani teaches the invention as claimed including a method

and a system for DNS translation, where the client is provided with a plurality of servers and

directed to the server with the most optimal path. Aviani teachings comprise of:

a processor (Col 6, lines 59-63. Server (Inherent));

a memory, at least one of the processor and the memory being adapted for (Col 6, lines

59-63. Server (Inherent)):

receiving a service request (Col 6, lines 50-54. Receives a service request.);

sending a plurality of packets in response to receiving the service request (Col 8, line 66-

Col 9, line 4. Each server sends a response.), each of the plurality of packets identifying a

different type of service via which to send the corresponding packet, wherein the type of service

indicates a service provider (Col 8, lines 26-28, Col 9, lines 30-41. Response packet contains

IP address of server.); and

maintaining a mapping of each different type of service to an IP address, thereby

enabling the service request to be processed via an IP address associated with a type of

service identified in a first one of the plurality of packets to be received (Col 8, lines 35-30; Col

9, lines 30-41. Bind IP address to domain name. Col 9, lines 46-54. Server provides resolved

IP address to client.).

6.   As per claim 2, Aviani teaches the method as recited in claim 1, wherein the service

request is a TCP connection request or a DNS request (Col 6, lines 50-52. DNS request.)

7.   As per claim 4, Aviani teaches the method as recited in claim 1, wherein the type of

service indicates a specific network connection or domain (Col 9, lines 30-47. Response

contains IP address of server.).

8.   As per claim 5, Aviani teaches the method as recited in claim 1, wherein maintaining the

mapping comprises maintaining a plurality of A-records, each of the A-records having a type of

service field adapted for indicating a type of service and wherein receiving the request

comprises receiving a DNS A-record request (Col 6, lines 50-63. Receives DNS A record

request and process request. Identifies server to process request.).

9.   As per claim 42, Aviani teaches the method as recited in claim 1, wherein the type of

service identifies the service provider (Col 9, lines 28-48. IP addresses correlate to different

servers.).

10.   As per claims 9, 23, 24, and 25, Aviani teaches the invention as claimed including the

method, apparatus, and system for processing a DNS request, Aviani's teachings comprising:

        a processor (Fig. 1; Col 6, lines 59-63. Server. Processor is inherent.); and

        a memory, at least one of the processor and the memory being adapted for (Fig. 1; Col

6, lines 59-63. Server. Memory is inherent.):

        receiving a DNS request indicating a domain name for which an IP address is requested

(Claims 1 and 4. Receiving DNS record request.); and

        transmitting a plurality of DNS responses in response to the DNS request, each of the

plurality of DNS responses being transmitted via different path associated with a different type

of service, wherein the type of service identifies or is mapped to a service provider (Claim 1; Fig.

2. Causes client servers to send responses to the client device.).

11.   As per claim 11, Aviani teaches the method as recited in claim 9, wherein each of the

plurality of DNS responses includes a different one of a plurality of IP addresses, each of the

plurality of IP addresses being mapped to a different type of service (Claim 3. Client device

communicates with a client server. Col 8, lines 25-30. DNS response contains the IP address

particular to the client server.).

12.   As per claim 12, Aviani teaches the method as recited in claim 9, wherein each of the

plurality of DNS responses has the same source address and destination address (Col 8, lines

20-29. Response from host server. Col 8, line 66-Col 9, line 2. DNS response to same name

server.).

13.   As per claim 13, Aviani teaches the method as recited in claim 9, further comprising:

providing a service identifier identifying service provider that is to be used to route the

corresponding DNS response (Claim 1. DNS response routed to client servers.).

14.   As per claim 14, Aviani teaches the method as recited in claim 9, wherein each of the

plurality of DNS responses comprises a type of service field adapted for indicating a type of

service to be used during next-hop based routing based on the type of service (Claim 1. DNS

response routed to client servers. Col 8, line 66 - Col 9, line 8. Response routed to name

server.).

15.   As per claim 15, Aviani teaches the method as recited in claim 9, wherein receiving a

DNS request comprises receiving a DNS A-record request and wherein transmitting a plurality

of DNS responses comprises transmitting a plurality of A-records (Col 4, line 67; Col 6, lines 52-

55. DNS A record request. Column 9, lines 2-5; 36-41. Plurality of A-records.).

16.   As per claim 16, Aviani teaches the method as recited in claim 15, wherein each of the

plurality of A-records includes a different IP address that is mapped to a service provider (Col 8,

lines 25-29; Column 9, lines 36-41. Response contains IP addresses of particular client

servers.).

17.   As per claim 17, Aviani teaches the method as recited in claim 16, wherein each of the

plurality of A-records further includes a field adapted for identifying the service provider (Col 8,

lines 25-29; Column 9, lines 36-41. Response contains IP addresses of particular client

servers.).

18.   As per claim 18, Aviani teaches the method as recited in claim 17, further comprising:

maintaining a table of A-records that includes the plurality of A-records (Claim 1; Col 7, lines 29-

33. Record of client servers.).

19.   As per claim 19, Aviani teaches the method as recited in claim 9, wherein transmitting a

plurality of DNS responses comprises transmitting the plurality of DNS responses to client DNS

server associated with a client initiating the DNS request (Fig. 2; Col 8, line 66 - Col 9, line 4.

DNS responses send to name server.).

20.   As per claim 20, Aviani teaches the method as recited in claim 19, wherein the client

DNS server is configured to identify a first one of the plurality of DNS responses to be received

from the network device (Col 9, lines 28-44. Identify first response from client server. IP

address of the client server will bind with requested domain name.) and to respond to the client

with an IP address of the service provider corresponding to the type of service identified in the

first one of the plurality of DNS responses (Col 9, lines 46-50. Client receives IP address of the

server.).

21.   As per claim 21, Aviani teaches the method as recited in claim 20, wherein the client

DNS server is further configured to obtain the type of service from the first one of the plurality of

DNS responses and obtain an IP address of the service provider corresponding to the type of

service from a mapping table (Col 9, lines 28-44. Identify first response from client server. IP

address of the client server will bind with requested domain name.).

22.   As per claim 22, Aviani teaches the method as recited in claim 9, wherein transmitting

the plurality of DNS responses comprises transmitting the plurality of DNS responses via one or

more intermediate routers configured to perform next-hop policy based routing based on the

type of service (Claim 1. DNS response routed to client servers. Col 8, line 66 - Col 9, line 8.

Response routed to name server. Fig. 2, Internet. Routers in data network is inherent.).

23.   As per claim 26, Aviani teaches the invention as claimed including the system for

selecting a service provider via which to process a client request, Aviani's teachings comprising:

        a network device adapted for receiving a DNS request indicating a domain name for

which an IP address is requested (Claims 1 and 4. Receiving DNS record request.) and

transmitting a plurality of DNS responses, each of the plurality of DNS responses being

transmitted via different path associated with a different type of service, wherein the type of

service identifies a service provider (Claim 1; Col 8, line 66 – Col 9, line 2; Fig. 2. Plurality of

DNS responses to the client device.);

        one or more intermediate routers configured to perform next-hop policy based routing

based on the type of service (Col 8, line 66 – Col 9, line 1. Responses send from client server

to name server. Fig. 2, Internet. Routers in data network is inherent.); and

a client DNS server associated with a client initiating the DNS request, the client DNS

server being configured to identify a first one of the plurality of DNS responses to be received

from the network device (Col 9, lines 32-35. Name server identifies one of the received

responses.) and to respond to the client with an IP address of the service provider identified by

the type of service identified in the first one of the plurality of DNS responses (Col 9, lines 46-50.

Provides resolved IP address to the client.).

24.   As per claim 27, 39-41, Aviani teaches the invention as claimed including a method and

storage medium for establishing a TCP connection, comprising:

receiving a TCP connection request from a client (Col 5, lines 54-55. Invention may be

implemented using different protocols including DNS and TCP. Col 6, lines 59-63 Receives

request.);

sending a plurality of TCP acknowledgement packets to the client via a plurality of paths,

each of the plurality of paths corresponding to a type of service, wherein the type of service

indicates a service provider (Col 8, line 66-Col 9, line 4. Plurality of responses.

Acknowledgements to request is inherent in TCP.);

receiving an acknowledgment message from the client that indicates receipt of one of

the plurality of TCP acknowledgment packets sent by the network device (Transmission of

acknowledgements in TCP is inherent.);

ascertaining the type of service via which the TCP acknowledgement packet received by

the client was transmitted (Col 9, lines 28-47. Receives IP address of client server.); and

providing an HTTP redirect to an IP address directly corresponding to the service

provider indicated by the type of service (Fig. 5; Col 9, line 66-Col 10, line 2. HTTP request.).

25.   As per claim 29, Aviani teaches the method as recited in claim 27, wherein the TCP

connection request comprises a TCP packet having a synchronization flag set and wherein

each of the plurality of TCP acknowledgement packets comprise a TCP packet having a

synchronize flag set and an acknowledgment flag set (Synchronize flag set in TCP

acknowledgment is inherent.).

26.   As per claim 30, Aviani teaches the method as recited in claim 27, wherein each of the

plurality of TCP acknowledgement packets comprises a type of service field adapted for

indicating a service provider (Col 8, lines 26-29; Col 9, lines 35-39. Response contains IP

address of server.).

27.   As per claim 31, Aviani teaches the method as recited in claim 27, wherein each of the

plurality of TCP acknowledgment packets comprise a type of service field adapted for indicating

a type of service to be used during next-hop based routing on the type of service (Col 8, line 66

– Col 9, line 1. Responses send from client server to name server. Col 9, lines 30-39.

Response contains IP addresses. Fig. 2, Internet.).

28.   As per claim 32, Aviani teaches the method as recited in claim 27, wherein each of the

plurality of TCP acknowledgement packet includes a sequence number field, the method further

comprising: providing a sequence number in the sequence number field indicating an order in

which the plurality of TCP acknowledgements packets are sent (Sequence numbers indicating

order in acknowledgment messages are inherent in TCP.).

29.   As per claim 33, Aviani teaches the method as recited in claim 32, wherein receiving an

acknowledgment message from the client that indicates receipt of one of the plurality of TCP

acknowledgment packets sent by the network device comprises: receiving an acknowledgement

message from the client including the sequence number of a first one of the plurality of TCP

acknowledgement packets received by the client (Col 9, lines 29-41. Receives a first one of

plurality of packets. Acknowledgment to received sequenced number is inherent in TCP.).

30.   As per claim 34, Aviani teaches the method as recited in claim 33, where each of the

plurality of TCP acknowledgement packets further comprises: a type of service field adapted for

indicating a service provider via which the corresponding acknowledgement packet is to be

transmitted (Col 9, line 35-40, 46-49. Response contains IP address of client server.).

31.   As per claim 35, Aviani teaches the method as recited in claim 34, further comprising:

        obtaining the sequence number from the acknowledgment message received from the

client (Sequence number in message is inherent in TCP.);

        determining a type of service associated with the sequence number (Col 9, lines 39-48.

IP address to client.); and

        ascertaining an IP address corresponding to the service provider indicated by the type of

service (Col 9, lines 39-48. IP address to client.).

32.   As per claim 36, Aviani teaches the method as recited in claim 35, wherein ascertaining

an IP address corresponding to the service provider indicated by the type of service comprises:

        performing a look up in a mapping table, the mapping table including a plurality of IP

addresses, each of the plurality of IP addresses corresponding to a different service provider

(Col 7, lines 36-40. Packets send to plurality of client servers. Mapping table inherent to send packets.).

33.   As per claim 37, Aviani teaches the method as recited in claim 32, wherein each of the plurality of TCP acknowledgment packets further comprises: a type of service field adapted for indicating a service provider via which the corresponding acknowledgment packet is to be transmitted (Col 9, line 35-40, 46-49. Response contains IP address of client server.).

36.   As per claim 38, Aviani teaches the method as recited in claim 32, where each of the plurality of TCP acknowledgment packets further comprises a type of service field adapted for indicating a type of service to be used during next-hop routing based on the type of service (Col 8, line 66 – Col 9, line 1. Responses send from client server to name server. Fig. 2, Internet. Routers in data network are inherent.).

Response to Arguments

37.   Applicant's arguments with respect to claims 1-2, 4-9, 11-27, and 29-42 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

38.   The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references deal with acknowledgments and sequence numbers in TCP.

i)   RFC 793, Transmission Control Protocol, http://www.faqs.org/rfcs/rfc793.html

ii)   US Patent #6,272,550

    iii)   US Patent #6,298,380

    iv)   US Patent #6,411,986

    v)   US Publication #US 2005/0172011 (Same assignee) deals with providing multiple

           responses in a plurality of different paths.

39.   A shortened statutory period for reply to this Office action is set to expire THREE

MONTHS from the mailing date of this action.

40.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can

normally be reached on Monday to Thursday 8AM to 5PM and every other Friday.

41.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John A. Follansbee can be reached on 571 272-3964. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

42.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 14, 2006
JJ   JOHN FOLLANSBEE
                         SUPERVISORY PATENT EXAMINER
                           TECHNOLOGY CENTER 2100